

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A computer-implemented method for processing XML requests on a router, the method comprising the machine executed steps of:

generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,

wherein the client application is not XML-aware, and

wherein parameters of the request are expressed in name/value pairs;

examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

parsing the XML request to identify one or more XML elements contained in the XML request;

generating one or more data requests based upon the one or more XML elements contained in the XML request; and

processing the one or more data requests against the management data maintained in the database by the router; and

storing updated management data at the router without implementing the updated management data,

wherein the one or more data requests comprise a request for a confirmation that updated management data have been implemented by the router in response to a request to commit changes to the management data on the router.

2. (Original) The method as recited in Claim 1, wherein the step of parsing the XML request to identify one or more XML elements contained in the XML request includes identifying one or more XML tags contained in the XML request and the step of generating the one or more data requests based upon the one or more XML elements contained in the XML request includes generating the one or more data requests based upon the one or more XML tags contained in the XML request.
3. (Original) The method as recited in Claim 1, further comprising the machine-implemented step of generating an XML response based upon processing the one or more data requests against the management data maintained in the database by the router.
4. (Currently Amended) A computer-implemented method for processing XML requests on a router, the method comprising the machine executed steps of:
generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;
receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,
wherein the client application is not XML-aware, and
wherein parameters of the request are expressed in name/value pairs;
examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

parsing the XML request to identify one or more XML tags contained in the XML request;

identifying one or more management data items in the management data that are associated with the one or more XML tags;

generating one or more operations to be performed on the one or more management data items, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router in response to a request to commit changes to the management data on the router;

processing the one or more operations against the one or more management data items maintained in the database; and

generating an XML response and sending the XML response to the client;

wherein the XML response contains a confirmation that the first operation and the second operation occurred.

5. (Currently Amended) A method for generating schema data used by a router to process XML requests, the method comprising the machine-implemented steps of:
generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router, wherein the client application is not XML-aware, and wherein parameters of the request are expressed in name/value pairs;

examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving schema definition data that defines both a hierarchical data model used by the router and an XML interface used by client to generate XML requests for the router

wherein the XML request comprises at least one of:

- a request to perform one or more operations on the management data maintained in a database by the router, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router; or
- a data request, wherein the data request comprises a request for a confirmation that updated management data has been implemented by the router in response to a request to commit changes to management data on the router;

processing the schema definition data to generate processed schema definition data; and storing the processed schema definition data on the router.

6. (Currently Amended) A machine-readable storage medium for processing XML requests on a router, the machine-readable storage medium carrying instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,

wherein the client application is not XML-aware, and

wherein parameters of the request are expressed in name/value pairs;

examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

parsing the XML request to identify one or more XML elements contained in the XML request;

generating one or more data requests based upon the one or more XML elements contained in the XML request; and

processing the one or more data requests against the management data maintained in the database by the router; and

storing updated management data at the router without implementing the updated management data,

wherein the one or more data requests comprise a request for a confirmation that updated management data have been implemented by the router in response to a request to commit changes to the management data on the router.

7. (Previously Presented) The machine-readable storage medium as recited in Claim 6, wherein the step of parsing the XML request to identify one or more XML elements contained in the XML request includes identifying one or more XML tags contained in the XML request and the step of generating the one or more data requests based upon the one or more XML elements contained in the XML request includes generating the one or more data requests based upon the one or more XML tags contained in the XML request.
8. (Previously Presented) The machine-readable storage medium as recited in Claim 6, further comprising one or more additional instructions which, when executed by the one or more processors, cause the one or more processors to perform the step of generating an XML response based upon processing the one or more data requests against the management data maintained in the database by the router.
9. (Currently Amended) A machine readable storage medium for processing XML requests on a router, the machine-readable storage medium carrying instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:
generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;
receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,
wherein the client application is not XML-aware, and
wherein parameters of the request are expressed in name/value pairs;
examining the parameters of the request;
retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

parsing the XML request to identify one or more XML tags contained in the XML request;

identifying one or more management data items in the management data that are associated with the one or more XML tags;

generating one or more operations to be performed on the one or more management data items, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router in response to a request to commit changes to the management data on the router;

processing the one or more operations against the one or more management data items maintained in the database; and

generating an XML response and sending the XML response to the client;

wherein the XML response contains a confirmation that the first operation and the second operation occurred.

10. (Currently Amended) A machine-readable storage medium for generating schema data used by a router to process XML requests, the machine-readable storage medium carrying instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:
generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,

wherein the client application is not XML-aware, and

wherein parameters of the request are expressed in name/value pairs;

examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving schema definition data that defines both a hierarchical data model used by the router and an XML interface used by client to generate XML requests for the router,

wherein the XML request comprises at least one of:

- a request to perform one or more operations on management data maintained in a database by the router, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router; or
- a data request, wherein the data request comprises a request for a confirmation that updated management data has been implemented by the router in response to a request to commit changes to management data on the router;

processing the schema definition data to generate processed schema definition data; and

storing the processed schema definition data on the router.

11. (Currently Amended) An apparatus for processing XML requests on a router, the apparatus comprising a memory storing instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,

wherein the client application is not XML-aware, and

wherein parameters of the request are expressed in name/value pairs;

examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

parsing the XML request to identify one or more XML elements contained in the XML request;

generating one or more data requests based upon the one or more XML elements contained in the XML request; and

processing the one or more data requests against the management data maintained in the database by the router; and

storing updated management data at the router without implementing the updated management data,

wherein the one or more data requests comprise a request for a confirmation that updated management data have been implemented by the router in response to a request to commit changes to the management data on the router.

12. (Original) The apparatus as recited in Claim 11, wherein the step of parsing the XML request to identify one or more XML elements contained in the XML request includes identifying one or more XML tags contained in the XML request and the step of generating the one or more data requests based upon the one or more XML elements contained in the XML request includes generating the one or more data requests based upon the one or more XML tags contained in the XML request.
13. (Original) The apparatus as recited in Claim 11, wherein the memory further comprises one or more additional instructions which, when executed by the one or more processors, cause the one or more processors to perform the step of generating an XML response based upon processing the one or more data requests against the management data maintained in the database by the router.
14. (Currently Amended) An apparatus for processing XML requests on a router, the apparatus comprising a memory carrying instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:
generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;
receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,
wherein the client application is not XML-aware, and
wherein parameters of the request are expressed in name/value pairs;
examining the parameters of the request;
retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

parsing the XML request to identify one or more XML tags contained in the XML request;

identifying one or more management data items in the management data that are associated with the one or more XML tags;

generating one or more operations to be performed on the one or more management data items, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router in response to a request to commit changes to the management data on the router;

processing the one or more operations against the one or more management data items maintained in the database; and

generating an XML response and sending the XML response to the client;

wherein the XML response contains a confirmation that the first operation and the second operation occurred.

15. (Currently Amended) An apparatus for generating schema data used by a router to process XML requests, the apparatus comprising a memory storing instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:
generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router, wherein the client application is not XML-aware, and wherein parameters of the request are expressed in name/value pairs;

examining the parameters of the request;

retrieving the XML tag information that corresponds to each of the parameters from the XML file;

generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

receiving schema definition data that defines both a hierarchical data model used by the router and an XML interface used by client to generate XML requests for the router, wherein the XML request comprises at least one of:

a request to perform one or more operations on management data maintained in a database by the router,

wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router; or

a data request, wherein the data request comprises a request for a confirmation that updated management data has been implemented by the router in response to a request to commit changes to management data on the router;

processing the schema definition data to generate processed schema definition data; and storing the processed schema definition data on the router.

16. (Currently Amended) An apparatus for processing XML requests on a router, the apparatus comprising:

means for generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each

property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

means for receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,

wherein the client application is not XML-aware, and

wherein parameters of the request are expressed in name/value pairs;

means for examining the parameters of the request;

means for retrieving the XML tag information that corresponds to each of the parameters from the XML file;

means for generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

means for receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

means for parsing the XML request to identify one or more XML elements contained in the XML request;

means for generating one or more data requests based upon the one or more XML elements contained in the XML request; and

means for processing the one or more data requests against the management data maintained in the database by the router; and

means for storing updated management data at the router without implementing the updated management data,

wherein the one or more data requests comprise a request for a confirmation that updated management data have been implemented by the router in response to a request to commit changes to the management data on the router.

17. (Original) The apparatus as recited in Claim 16, further comprising means for identifying one or more XML tags contained in the XML request and means for generating the one or more data requests based upon the one or more XML tags contained in the XML request.
18. (Original) The apparatus as recited in Claim 16, further comprising means for generating an XML response based upon processing the one or more data requests against the management data maintained in the database by the router.
19. (Currently Amended) An apparatus for processing XML requests on a router, the apparatus comprising:
means for generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;
means for receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,
wherein the client application is not XML-aware, and
wherein parameters of the request are expressed in name/value pairs;
means for examining the parameters of the request;
means for retrieving the XML tag information that corresponds to each of the parameters from the XML file;
means for generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;
means for receiving, at the router from the client, the XML request to perform the operation on the management data maintained in a database by the router;

means for parsing the XML request to identify one or more XML tags contained in the XML request;

means for identifying one or more management data items in the management data that are associated with the one or more XML tags;

means for generating one or more operations to be performed on the one or more management data items, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router in response to a request to commit changes to the management data on the router;

means for processing the one or more operations against the one or more management data items maintained in the database; and

means for generating an XML response and sending the XML response to the client; wherein the XML response contains a confirmation that the first operation and the second operation occurred.

20. (Currently Amended) An apparatus for generating schema data used by a router to process XML requests, the apparatus comprising:

means for generating, at a client element by a first client application, an XML file that includes XML tag information that corresponds to attribute values for each property of a plurality of properties for one or more components that are supported by the router, wherein the XML file is generated based in part on command line interface (CLI) definition files corresponding to each of the one or more components;

means for receiving, at [[a]] the client element from a second client application, a request that conforms to a table-based data model to perform an operation on management data maintained by the router,

wherein the client application is not XML-aware, and

wherein parameters of the request are expressed in name/value pairs;

means for examining the parameters of the request;

means for retrieving the XML tag information that corresponds to each of the parameters from the XML file;

means for generating, by the client element, an XML request based on the parameters of the request from the client application that is not XML-aware, wherein the XML request is generated using the XML tag information;

means for receiving schema definition data that defines both a hierarchical data model used by the router and an XML interface used by client to generate XML requests for the router,

wherein the XML request comprises at least one of:

- a request to perform one or more operations on management data maintained in a database by the router, wherein a first operation includes receiving updated management data from the client, and wherein a second operation includes implementing the updated management data on the router; or

- a data request, wherein the data request comprises a request for a confirmation that updated management data has been implemented by the router in response to a request to commit changes to management data on the router;

means for processing the schema definition data to generate processed schema definition data; and

means for storing the processed schema definition data on the router.